APPENDIX A

BENCHMARK CHARACTERISTIC ANALYSIS OF DATA FROM FIXED STATIONS IN THE EEL-WABASH WATERSHED

Station ELL-7

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	24	213.75	191.0804	236.4196	211.5	5130	109	308	179	261	199	82	2882.196	53.68608	10.95863	-0.10857	0.472261	-0.57561	0.917777
Ammonia (mg/l as N)	24	0.102083	0.054473	0.149694	0.05	2.45	0.05	0.5	0.05	0.1	0.45	0.05	0.012713	0.112751	0.023015	2.549489	0.472261	6.47208	0.917777
BOD (mg/l)	24	1.383333	0.865855	1.900812	1.4	16.6	0.5	2.9	0.5	1.85	2.4	1.35	0.663333	0.814453	0.235112	0.480358	0.637302	-0.6509	1.232246
COD (mg/l)	24	21.7375	18.35211	25.12289	22	521.7	9.2	40.8	14.45	27.3	31.6	12.85	64.27636	8.017254	1.636515	0.525376	0.472261	-0.15896	0.917777
Cyanide (mg/l)	0																		
Nitrate (mg/l as N)	24	3.7875	2.962447	4.612553	3.7	90.9	1.1	7.5	2.1	5	6.4	2.9	3.817663	1.953884	0.398835	0.610708	0.472261	-0.60858	0.917777
Total Phosphorus (mg/l as P)	24	0.146458	0.107257	0.185659	0.13	3.515	0.015	0.37	0.075	0.205	0.355	0.13	0.006618	0.092836	0.01895	0.764363	0.472261	0.348519	0.917777
Total Solids (mg/l)	24	448.9583	431.89	466.0267	443	10775	388	561	421.5	468	173	46.5	1633.868	40.42113	8.250929	0.735054	0.472261	1.198353	0.917777
Suspended Solids (mg/l)	24	34.16667	14.51771	53.81563	17	820	2	208	6	44.5	206	38.5	2165.275	46.53252	9.498411	2.610132	0.472261	8.112168	0.917777
Dissolved Solids (mg/l)	1	80				80	80	80											
Sulfate (mg/l)	0																		
TKN (mg/l as N)	0																		
E. coli (CFU/100ml)	23	809.3478	-38.0869	1656.783	260	18615	5	9400	80	570	9395	490	3840214	1959.646	408.6145	4.189728	0.481337	18.64334	0.934764
TOC (mg/l)	0																		
Hardness (mg/l)	24	286.625	259.425	317.825	305	6927	120	402	250	331	282	81	4781.897	69.15126	14.11544	-0.93493	0.472261	0.730289	0.917777
Chloride (mg/l)	0																		
Dissolved Oxygen (mg/l)	24	11.47583	10.43574	12.51593	11.15	275.42	7.49	15.84	9.68	13.945	8.35	4.165	6.067112	2.463151	0.502789	0.149246	0.472261	-1.16574	0.917777
pH	24	8.165417	8.078192	8.252642	8.145	195.97	7.82	8.54	7.995	8.35	0.72	0.355	0.042669	0.206566	0.042165	0.241789	0.472261	-1.09499	0.917777
Copper (ug/l)	8	4.2875	2.103563	6.471437	3.6	34.3	2	8.3	2	6.4	6.3	4.4	6.824107	2.612299	0.923587	0.454626	0.752101	-1.69011	1.48088
Iron (ug/l)	8	1340	172.8683	2507.132	810	10720	110	4400	445	1850	4290	1405	1948971	1396.056	493.5802	1.772949	0.752101	3.372255	1.48088
Zinc (ug/l)	8	8.46875	0.468807	16.46869	5.7	67.75	2.25	31	2.25	9.3	28.75	7.05	91.5671	9.56907	3.383177	2.319814	0.752101	5.827694	1.48088

Station ELL-41

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	74	231.0135	219.0447	242.9823	241.5	17095	115	325	187	272	210	85	2668.808	51.66051	6.005412	-0.47353	0.279197	-0.79916	0.551684
Ammonia (mg/l as N)	74	0.12973	0.090909	0.16855	0.05	9.6	0.05	1.2	0.05	0.2	1.15	0.15	0.028077	0.167561	0.019479	4.174785	0.279197	22.87703	0.551684
BOD (mg/l)	35	2.097143	1.580363	2.613923	1.5	73.4	0.5	7	1.1	3.1	6.5	2	2.263227	1.504403	0.25429	1.333091	0.397694	2.105821	0.777794
COD (mg/l)	74	21.81757	19.4945	24.14064	19.1	1614.5	2.5	55	15.6	24.6	52.5	9	100.5409	10.02701	1.165616	1.310589	0.279197	1.716878	0.551684
Cyanide (mg/l)	71	0.005606	0.005096	0.006116	0.005	0.398	0.005	0.018	0.005	0.005	0.013	0	4.64E-06	0.002155	0.000256	4.839451	0.284805	22.7423	0.562511
Nitrate (mg/l as N)	74	2.62027	2.264541	2.975999	2.3	193.9	0.6	8.7	1.5	3.3	8.1	1.8	2.357529	1.535425	0.178489	1.492901	0.279197	3.118577	0.551684
Total Phosphorus (mg/l as P)	74	0.167027	0.135407	0.198647	0.12	12.36	0.04	0.67	0.09	0.19	0.63	0.1	0.018627	0.13648	0.015865	2.215814	0.279197	5.077619	0.551684
Total Solids (mg/l)	73	482.8575	460.7058	504.6092	484	35234	269	976	443	512	707	69	8852.034	94.08525	11.01185	2.115912	0.281029	10.39932	0.555223
Suspended Solids (mg/l)	74	43.78378	28.90252	58.66505	22	3240	2	344	7	41	342	34	4125.706	64.23166	7.466779	2.653837	0.279197	7.44438	0.551684
Dissolved Solids (mg/l)	0																		
Sulfate (mg/l)	0																		
TKN (mg/l as N)	69	1616.739	910.3966	2323.082	440	111555	5	14000	140	1000	13995	860	8645494	2940.322	353.9732	2.73918	0.288737	7.42072	0.570095
E. coli (CFU/100ml)	0																		
TOC (mg/l)	74	314.0135	299.2024	328.8247	325.5	23237	164	453	274	360	289	86	4086.918	63.929	7.431596	-0.52352	0.279197	-0.27206	0.551684
Hardness (mg/l)	0																		
Chloride (mg/l)	57	10.21456	9.727806	10.70132	9.94	582.23	6.79	14.17	8.64	11.41	7.38	2.77	3.365347	1.834488	0.242984	0.226738	0.316327	-0.80921	0.623134
Dissolved Oxygen (mg/l)	58	7.923276	7.840951	8.0056	8.025	459.55	7.01	8.5	7.73	8.14	1.49	0.41	0.098029	0.313097	0.041112	-0.7187	0.31372	0.160336	0.618136
pH	9	6.666667	2.215456	9.917878	4.5	54.6	2	16	2	9.1	14	7.1	25.1025	5.01024	1.67008	1.092878	0.717137	0.322499	1.399708
Copper (ug/l)	8	2442.5	-538.875	5423.875	770	19540	220	10000	390	3500	9780	3110	1.27E+07	3566.149	1260.824	1.802925	0.752101	2.465223	1.48088
Iron (ug/l)	10	12.61	2.033306	23.18669	5.65	126.1	2.25	43	2.25	26	40.75	23.75	218.6021	14.7852	4.67549	1.304726	0.687043	0.360865	1.334249
Zinc (ug/l)																			